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## JOB ANALYSIS IN PRISONS AND STATE INSTITUTIONS

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**I**T would seem that the leaders of industry, today, are between the devil and the deep blue sea in their attitude toward the workingman. If they adopt the plan of days gone by and work employees eight or more hours per day on a steady grind without provision for any form of relaxation, they are soon marked as slave-drivers and are loathed by the men, condemned by the press, and ostracized by the public.

On the other hand if the employers of labor, in their endeavor to make their men happier, provide suitable working conditions including social and welfare facilities, they are oftentimes accused of instituting such measures as a smoke-screen to cover their real attitude toward labor. Their actions are satirized by the politicians and their motives are impugned by shallow vote-seeking candidates.

Rockefeller, Carnegie, Morgan, John Mitchell and Samuel Gompers in their fields, whatever the criticism of them in other respects, have done more for science, education and the public welfare than any group of institutions, universities or colleges in the world. Nevertheless they are daily made the subject of vitriolic attacks by unprincipled political leaders or by narrow-minded persons. I venture to predict that these great men, who are now so roughly abused, will in the next generation or so stand out among the greatest public benefactors known to mankind.

A very similar situation exists, today, in the administration of our correctional institutions. If the prisoner is worked with the idea alone of getting everything out of him that is possible from a productive standpoint, the prison administrator is quickly dubbed a brute and a slave-driver of the worst sort. If, on the other hand, opportunities for education, training, and welfare are afforded, in order to improve the physical, social and moral conditions of the offender and to prepare him properly for his eventual return to society, the prison administrator is soon berated as a faddist and a mollicoddler.

If we are able to continue our success in making a first-class demonstration of thoroughly modern administrative employment and training systems in New Jersey State institutions, we shall have contributed much toward the solution of the problems of industrial management. We have assumed that if we can take the average unskilled, under-developed, disillusioned and skeptical prisoners in the State Prison and lead them to become careful and enthusiastic workmen, then surely it would be easy to do the same thing and better with free workingmen. Three and one-half years ago we inherited an old prison plant, much of which was nearly one hundred years old. It was inadequate, dingy and disgraceful in almost every particular and had to be converted into a modern industrial reformatory. Surely no business executive ever faced a more discouraging outlook than we when we began. Our success thus far leads us to believe that in job analysis, in training and in placement we are on the right track.

In all of our work on occupational placement we have emphasized three distinct phases, namely, vocational and trade training, industrial work and discipline. We firmly believe in the importance of these distinctions. These distinctions are made not for effect or for theoretical purposes, but are absolutely essential for the successful placement of the individual prisoner. Of course, industrial management may not now make these distinctions but I think it will, for it seems proper to demand or expect a greater share of general social responsibility from our workshops and industries than society now commonly receives. Suitable working conditions are absolutely necessary for the social success of men, and every industry should feel a certain moral obligation to secure the successful adaptation of its employees. While this may be argued on moral grounds with considerable force, it can be argued even more effectively on the grounds of the ultimate return to the industry, inasmuch as we may take it for granted that the happier a man is in his work the more suitable will be his employment, and no man is happy in his work, if the work does not offer a certain degree of educational advancement, a direct interest in some particular aspect of the output and some degree of moral responsibility to the management, to his fellows and to the consuming public.

For prison purposes we combine vocational and trade train-

ing under one head, meaning by this that occupational placement is made principally for purposes of training. The work may be entirely manual, or entirely academic, or both, depending upon the type of placement to be secured. If the man works in the automobile tag shop there is no very great demand for any academic training; if the man is being educated as a bookkeeper his training may be almost wholly of an academic nature. Ordinarily, however, it will be necessary to correlate school and shop in vocational and trade training. The purpose of trade training, as I understand it, is to furnish a man with an intelligent interest in his work as well as to furnish him with the proper technique and facility. In such training there is, of course, a heavy emphasis upon learning through definite instruction, which may be more or less formal, according to the nature of the work.

In industrial work the occupational assignment involves particularly production, output, maintenance, general construction and concrete results. Here the emphasis is upon the product rather than upon the training and the assignee is expected to give practical marketable results. When industrial work is correlated with trade training it is a sort of graduate trade training school, in which a man acquires industrial speed and facility, standardizes his output and perfects his skill. This is the journeyman stage of his industrial training, while the vocational training belongs to the novice stage and the trade training to the apprentice stage of the man's development.

The disciplinary value of occupational assignment comes from the training which it gives a man in persistent, careful and responsible work. Many of our prisoners have never done an honest day's work, or have never stuck at one job for any serious length of time, or have never reached the stage of accuracy, care and trustworthiness that would enable them to obtain remunerative employment. There is a certain moral side to every man's work. To impart trustworthiness is a definite duty in any form of industrial training. It is, I think, unfortunate that our commercial shops and industries do not more positively encourage the development of industrial morality. Inducements should be offered to keep a man from shirking, to increase his accuracy, to make him more careful of his materials and tools and more conscientious in his effort and

the use of his time. It is the absence of moral responsibility which predisposes a man toward anti-social conduct. From small beginnings, such as conscienceless loafing, petty thieving of materials, slipshod work and wastefulness of materials, many men start on the steep decline toward actual criminal offenses. Frequently such beginnings lead to a warped view of social responsibility. Frequently, however, these are signs of an original defective personality or of unfortunate environment or training. In all prison work there is a heavy responsibility for giving definite training, both direct and indirect, in these industrial virtues. Unless a man gets from his occupational assignments a definite respect and desire for conscientious labor, his industrial training cannot be said to be complete.

Passing from this statement of our aims and purposes to practical explanation of how we attacked the whole problem, I should like to describe eight steps which we have followed in making job analyses and occupational placements at the New Jersey State Prison. I will describe these steps in the order of their sequence as we took them. You will see that perhaps some of the later steps should have been made first, but it was important to do the work and do it at once and to leave modifications and improvements for later consideration.

1. Our first step was to make a general survey of the prison to determine the status of the existing work, the official personnel, the methods of administration, the record system used in recording the conduct, effort and performance of the prisoners, and the general condition of the plant as a whole.

2. Our second step was to re-plan the existing shops, utilizing the best information obtainable as to how similar plants were actually laid out in the business world. We asked the manufacturers of machinery to submit the best plans they knew of for the lay-out of the machinery in our proposed new plant. These were taken and looked over by our own staff and a plot plan was made of each industry, so as to route the materials through the plant in proper manner without waste of motion and so as to make each unit of the plant available for training purposes as well as for production.

3. Our next step was to make a general survey of the prison population. This was done by means of the army group tests.

The purpose of this survey was to determine the general distribution of the prisoners with respect to intelligence and educational training. In view of the work done elsewhere on the psychological aspects of various occupations, the result of this survey indicated the broad lines of the occupational possibilities of the men in the prison. We could not know what to expect in the way of the industrial possibilities of the prisoners without first knowing their intellectual and educational capabilities. As a result of this first survey, we could actually predict the number of men suitable for certain general industrial levels and we recommended that the occupations to be installed should be based upon the number of men available at the different levels.

4. Having surveyed the population, our next step was to survey the industries as they then stood. This was done first by studying the existing new shops intensively with respect to their organization and the types of work and second by studying the comparatively unstandardized occupations elsewhere throughout the prison. The survey was conducted by means of an individual questionnaire applied by our industrial psychologist to each man at work and by conferences with my industrial assistants, with the shop officers and with other prison officials. This work enabled us to make up a table of industrial organization. In this table we scaled each of the jobs in each shop. That is to say, we rated each definite job on the basis of its demands with respect to intelligence, education, degree of skill and responsibility. The purpose of this survey was to show us the various pigeon-holes into which we could sort the new men as they came in for assignment. This enabled us to recommend men for specific assignments on a scientific basis. In other words, after knowing how many "holes" there were, which were square, which round, which triangular, and so on, we were able to fit our "pegs" accordingly because we determined their conformation by means of our entrance examinations.

5. As this work progressed and was improved, it became necessary for us to have more detailed information regarding the specific duties associated with each job. We therefore prepared a job specification card. This card was designed so as to be universally applicable throughout the prison. It was so

arranged that each job could be easily described by encircling numerous details presented on the card. We have applied this specification card very successfully in our last survey of the prison print-shop. Our method was to have each detailed job described and rated independently by the shop instructor and by the industrial psychologist. These independent ratings were then harmonized and approved by the supervisor of prison industries. This gave us much more accurate and more detailed information regarding each job. In other words, it was a more accurate measurement of the "holes" into which we expected to insert our "pegs".

6. To correspond to this increased accuracy in the specifications for the jobs, we developed a qualification card to represent more accurately the individual capabilities of our men. It includes a statement of a man's intelligence classification, mental age, degree of education, temperamental traits, occupational history, general industrial rating, and so on. The purpose of this qualification card was to enable us to compare more accurately the capabilities of each man with the requirements of the job to which we desired to assign him. This comparison of man-qualification cards with job-specification cards was made the basis of our survey of the new prison printing industry. Our separate report indicates how feasible the system is. For example, we found that a man who had previously been a boiler-maker and had become quite competent as a pressman was reassigned for training as a compositor. He had practically all the qualifications to make him a successful pressman and almost none of those required to make him a successful compositor. As a matter of fact, he did succeed as a pressman and failed as a compositor.

7. Under this improved system and with the additional information furnished thereby, we have been in a good position to make highly suitable adjustments of men and assignments. We have been recommending men for assignment on the basis of their qualifications and the demands of the various jobs. We have established a cross-index file which shows immediately which men are suitable for assignment to any type of work. That is, if the assigning officer wishes to place a man at suitable work he has these recommendations to follow, or if he wishes to select a man for a particular job he will have a list

of men from whom to choose. This very greatly reduces the work of the assigning officer because it enables him at once to assign a particular man to work or to fill a particular vacancy with a man. This system also materially increased the accuracy of his assignments because it is systematic and scientifically sound. At the same time, the lists of men available for particular jobs indicate the lines along which expansion of prison industries should take place. This is made clear in our last Annual Report for the prison, which pointed out the numbers of men available for different general types of work. It showed, for example, that there are four times as many men available for such work as is offered in the shop where automobile markers are made than can now be employed in that type of industry, while for the type of work which the shoe-manufacturing shop offers there are once again as many men available as can now be employed. On the other hand, not a sufficient number of high-grade men are available for the needs of the print shop, so that it is now necessary to assign men to that shop who are not mentally competent to receive that vocational and trade training with a view to making commercial use of it later. Another use of this system is to indicate the reasons for maladjustments. If a man is not making a success at his assignment, such a man can easily be referred to the psychologist for special industrial diagnosis. The psychologist will then compare his industrial qualifications with the demands of his work and determine what are the causes in the individual case for the failure in assignment. It may be that the work is either too easy or too hard for the man; it may be that the man is not applying himself to the best of his abilities; it may be that some external condition is the cause of his maladjustment.

8. This leads to another phase of the question of industrial fitness. As Professor Walter Dill Scott has so clearly pointed out, the full duty of the industrial psychologist or personnel manager is not accomplished when a suitable man has been found for the job or a suitable job for the man. The big problem is to keep a man happy in his work. The square "peg" may have been fitted into the square "hole", and yet conditions may so change either the size or the shape of the "peg" or the "hole" so as to produce a misfit. It is our obli-



gation, therefore, constantly to observe conditions and to endeavor to keep men adjusted both happily and successfully in their work. This means that we must keep in close touch with changing shop conditions and with those conditions which may arise to influence the man or the men in the shop. Thus the introduction of a new machine into a shop or the reorganization of the shop work may throw out of adjustment some of the men who were originally well assigned, or it may be that the change in an officer or in the working conditions will so affect the mental processes of the men in the shop that maladjustment is a consequence. The assigning officer, therefore, must not feel satisfied merely to have placed a man in the shop. It is his duty to keep in close touch with those conditions which influence the men and those changes which take place in the shop, so as to make the readjustment which may be necessary. For example, in our print shop a man was so successfully assigned as a press-feeder that he incurred the disapproval of the rest of the men in the shop, who accused him of "spoiling the job". He was making more than twice as many impressions as any other man. This man became maladjusted because of the antagonism which his industry and skill brought down upon his head. In another case a man very successfully assigned became maladjusted and disturbed half a dozen other men because he worked so successfully and rapidly that he did an ordinary day's work in half a day, with the result that in his spare time he annoyed the other men. In the first case it was necessary to raise the standard of work for the shop as a whole in order to keep a successful man adjusted. In the second case it was necessary to increase the amount and variety of the work to be done by the individual man, or else to release him from the shop after he had completed the allotted day's work. The instances in which men are failures because the work is too hard for them or the instruction insufficient, are, of course, fairly obvious.

9. In order to keep men adjusted and in order to carry out the training aspects of occupational assignments in the prison, it is necessary to modify training methods from time to time. Stagnation always tends to lower the morale of a shop and the morale of the individual workers, while progress tends to raise it. The successful shop, therefore, shows continued progress

with respect either to its equipment, or to its materials, or to its organization, or to its training methods. A successful shop will usually grow and expand and this growth or expansion ordinarily entails some modifications in the work done. Also, as we learn more and more about the management of the factory, we see ways and means of improving the working conditions or otherwise increasing the efficiency of the work. The time comes when it is necessary to correlate the shop work with some form of school work or to correlate the work of one shop with the work of another shop. In our department, therefore, every effort is made to correlate the work of the Division of Education and Classification with the work of the Division of Labor. A fine spirit of cooperation exists between these two divisions, based on the strong desire of the Division of Labor that each shop shall offer a positive training value to each man employed therein and on the equally strong desire of the Division of Education and Classification to suggest ways and means for developing the work along the lines most effectively adapted to the qualifications of the men to be employed. Similarly, the work of both of these divisions is closely related to the work of the Division of Parole and Domestic Relations. It is assumed that all of the work of the prison is designed to increase the chances of the man's success on parole. It is, therefore, necessary to appreciate the purposes and the policies of the Parole Division and to coordinate the types of training offered with the opportunities for employment afforded in the environment to which a man will return. I believe this coordination between these three divisions is one of the most precious possessions of the department in relation to the correctional value of the training offered in our institutions.

10. At the present time the psychologist has little more than entered upon successful methods of trade testing. Most of the methods now in use are intelligence tests and tests of motor coordination. The work done in the army has not proved as successful as was hoped. Methods of trade testing are now receiving the close attention of most of the psychological laboratories and research psychological bureaus. In our own work at the State Prison we are hoping to accomplish some definite results along these lines during the coming year. It is our plan to elaborate our system of examining in the direction of definite tests of occupational predisposition.

We have perfected our measurements of intelligence about as far as is necessary and have succeeded in reducing the time requirements to a minimum. We have materially reduced the amount of time ordinarily required for intelligence testing and we plan to use this saved time in the direction of tests of vocational aptitudes. This will involve not only closer study of the men themselves, but also closer psychological analysis of the work processes. We shall follow our former policy of working on the grosser aspects first and the finer aspects second. We, therefore, intend first to study the major degrees of motor coordination and skill required and perhaps later to follow these with more refined analyses. These should in turn lead to the development of suggestions for improving the methods of training, because when the work processes have been analyzed into their constituent parts we may see possibilities of making new combinations in the processes required.

I would reiterate with Scott that to keep a man successfully adjusted is almost as important as to make the initial adjustment. The commercial industries have made definite steps along the lines of industrial selection and placement. Many of the more advanced industries through their welfare departments have developed devices for sustaining the morale of their employees at a higher level. The coordination of such departments of welfare with departments of personnel in any commercial industry is fully as important as the correlation in our department of the several divisions previously mentioned. Obviously we must know a man's temperament, his peculiar aptitudes, his previous training and predispositions. It follows then that the foreman of experience, the capable trade instructor, the labor leader, the skilled industrial psychologist and the high-grade physician must work in harmony for him and for the industry.

The economy of a great preventive program, when contrasted with a plan which makes provision for patients after it is too late to train them, is too obvious to require comment. In all this work organized labor has been exceedingly helpful. In our state capital and labor have united upon the furtherance of the principle adopted by the American Federation of Labor at its convention of 1881, wherein it declared against the exploitation of prisoners and also against unfair competition with the products of free labor.